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CORRECT ANSWER SOLVED BY HADI
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(Final Term Past Paper)

(Made by Waqar & Solved By Hadi)

WARNING: Team HADI is not responsible for any mistake or wrong answer. All students reading and using this document may check and confirm the answers at their own.



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Best of luck!



Question No : 1 of 52

Marks: 1 (Budgeted Time 1 Min)

Which of the following is the best approach to implement generic algorithms with minimum number of coding lines?

Answer (Please select your correct option)

Templates

Overloading

Overriding

Friend function/class



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Question No : 2 of 52

Marks: 1 (Budgeted Time 1 Min)

A class template _____

Answer (Please select your correct option)

- Facilitates reuse of class
- Does not facilitate reuse of class
- Does not support generic methods
- Does not support static members



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Question No : 3 of 52

Marks: 1 (Budgeted Time 1 Min)

Templates automatically create different versions of a function,

Answer (Please select your correct option)

- depending on user input.
- At compile time.
- Depending on static time.
- Depending on function arguments.



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Question No : 4 of 52

Marks: 1 (Budgeted Time 1 Min)

When the base class and the derived class have a member function with the same name, you must be more specific which function you want to call (using _____).

Answer (Please select your correct option)

scope resolution operator

dot operator

null operator

Operator overloading



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Question No : 5 of 52

Marks: 1 (Budgeted Time 1 Min)

Considering the resolution order in which compiler search for functions in a program; the first priority is given to,

Answer (Please select your correct option)

- general template
- partial specialization
- complete specialization
- ordinary function



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When is a constructor called?

Answer (Please select your correct option)

- Each time the constructor identifier is used in a program statement
- During the instantiation of a new object
- During the construction of a new class
- At the beginning of any program execution



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Question No : 7 of 52

Marks: 1 (Budgeted Time 1 Min)

Consider the code below,

```
class Fred {  
public:  
Fred();  
...  
};
```

Answer (Please select your correct option)

- Fred a[10]; calls the default constructor 09 times
- Fred* p = new Fred[10]; calls the default constructor 10 times
- Produce an error
- Fred a[10]; calls the default constructor 11 times
- Fred* p = new Fred[10]; calls the default constructor 11 times
- Fred a[10]; calls the default constructor 10 times
- Fred* p = new Fred[10]; calls the default constructor 10 times



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Question No : 8 of 52

Marks: 1 (Budgeted Time 1 Min)

If **Rollno** is a **const** data member of a class **student** then which definition is correct for the member function **show ()**



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Answer (Please select your correct option)

- `int show() const { return Rollno; }`
- `void show() const { return Rollno; }`
- `int show() const { return Rollno + 50; }`
- `int show(num) const { Rollno = num; }`

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Question No : 9 of 52

Marks: 1 (Budgeted Time 1 Min)

Which of the following can be the instance of class Vehicle?

Answer (Please select your correct option)

- Car, Computer, Desk
- Ahmad, Bicycle, Truck
- Computer, Truck, Ahmad
- Car, Bicycle, Truck



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Question No : 10 of 52

Marks: 1 (Budgeted Time 1 Min)

Which is true about sub-typing in case of inheritance?

Answer (Please select your correct option)

In sub-typing derived class shows some extended behavior of its parent.

In sub-typing derived class shows some restricted behavior of its parent class.

In sub-typing derived class should be abstract.

Sub-typing has no relation with inheritance



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Question No : 11 of 52

Marks: 1 (Budgeted Time 1 Min)

A C++ class is similar to a _____.

Answer (Please select your correct option)

Structure

Header File

Library File

Function



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Question No : 12 of 52

Marks: 1 (Budgeted Time 1 Min)

What will be the value of the variable data and data2 respectively, If the function below is called 4 times?

```
void func()
{
    static int data = 4;
    int data2 = 4;
```

Answer (Please select your correct option)

8, 5

5, 8

5, 5

7, 5



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Question No : 13 of 52

Marks: 1 (Budgeted Time 1 Min)

Which members are lies somewhere between public and private members?

Answer (Please select your correct option)

Protected members

Global members

Static members

Friends members



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Question No : 14 of 52

Marks: 1 (Budgeted Time 1 Min)

A base class member or method that is alternatively defined in derived class is known as _____.

Answer (Please select your correct option)

- Overloaded
- Copy riding
- Overwriting
- Overriding



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Question No : 15 of 52

Marks: 1 (Budgeted Time 1 Min)

If a class D has been derived using protected inheritance from class B (If B is a protected base and D is derived class) then public and protected members of B _____ accessed by member functions and friends of class D and classes derived from D.

Answer (Please select your correct option)

can be

cannot be

does restrict to be

never



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Question No : 16 of 52

Marks: 1 (Budgeted Time 1 Min)

In Private _____ only member functions and friend classes or functions of a derived class can convert pointer or reference of derived object to that of parent object.

Answer (Please select your correct option)

specialization

inheritance

abstraction

composition



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The mechanism of selecting function at run time according to the nature of calling object is called,

Answer (Please select your correct option)

late binding

static binding

virtual binding

hybrid binding



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Question No : 18 of 52

Marks: 1 (Budgeted Time 1 Min)

Which of the following causes run time binding?

Answer (Please select your correct option)

- Declaring object of abstract class
- Declaring pointer of abstract class
- Declaring overridden methods as non-virtual
- Declaring object of derived class



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Question No : 19 of 52

Marks: 1 (Budgeted Time 1 Min)

Multiple inheritance can be of type

Answer (Please select your correct option)

- Public, Private
- Private, Protected
- Protected, Public
- Public, Protected, Private



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Question No : 20 of 52

Marks: 1 (Budgeted Time 1 Min)

Consider the following statements:

- 1) `int iArray[5];`
- 2) `int *pArr = iArray;`

Answer (Please select your correct option)

Error in first statement

Error in second statement

Error in both statements

No error in both statements



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Question No : 21 of 52

Marks: 1 (Budgeted Time 1 Min)

Consider the following definition.

```
template < class T > class Xyz { ... };
```

Answer (Please select your correct option)

- it defines a class template for integers only
- it defines a class template for any data type
- class templates are not defined in this way
- it defines template functions



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Question No : 22 of 52

Marks: 1 (Budgeted Time 1 Min)

```
template<> class Vector<void*> {  
    void** p;  
    //...  
    void*& operator[] ((int i);  
};
```

Answer (Please select your correct option)

- This specialization can be used as the common implementation for all Vectors of pointers.
- This specialization can then be used as the implimentation for all types of classes.
- This specialization can then be used for double type pointers.
- This specialization should be used for Vectors of int types.



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Question No : 23 of 52

Marks: 1 (Budgeted Time 1 Min)

Non Template Friend functions of a class are friends of _____ instance/s of that class.

Answer (Please select your correct option)

- One
- Two
- All instances of one date type
- All



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Question No : 24 of 52

Marks: 1 (Budgeted Time 1 Min)

Vectors contain contiguous elements stored as a[an] _____.

Answer (Please select your correct option)

variable

array

function

datatype



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Question No : 25 of 52

Marks: 1 (Budgeted Time 1 Min)

An STL algorithm is

Answer (Please select your correct option)

- A standalone function that operates on containers.
- A link between member functions and containers.
- A friend function of appropriate container classes.
- A member function of appropriate container classes.



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Question No : 26 of 52

Marks: 1 (Budgeted Time 1 Min)

Vector V with default constructor is defined, and another vector W is defined with one argument constructor with size 11, and insert 3 elements into each of these vectors with push_back(), then the size() member function will return ___ for V and ___ for W.

Answer (Please select your correct option)

11 for v and 3 for w.

0 for v and 0 for w.

0 for v and 3 for w.

3 for v and 11 for w.



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Question No : 27 of 52

Marks: 1 (Budgeted Time 1 Min)

The copy() algorithm returns an iterator to

Answer (Please select your correct option)

- the last element copied from.
- the last element copied to.
- the element one past the last element copied from.
- the element one past the last element copied to.



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Question No : 28 of 52

Marks: 1 (Budgeted Time 1 Min)

Using catch blocks in **incorrect order** is _____ error.

Answer (Please select your correct option)

- Syntax
- Logical
- Grammatical
- Runtime



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Question No : 29 of 52

Marks: 1 (Budgeted Time 1 Min)

We must release dynamic memory allocated in try block in _____

Answer (Please select your correct option)

- Catch block
- In main function block
- No need to release memory
- In constructor



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Question No : 30 of 52

Marks: 1 (Budgeted Time 1 Min)

In inheritance hierarchy which one is on the top?

Answer (Please select your correct option)

Subtyping

Specialization

Extension

Generalization



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In order to reuse the characteristics of more than one parent class, we must use:

Answer (Please select your correct option)

Inheritance

Protected inheritance

Multiple inheritance

Private inheritance



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_____ operator will take only one operand.

Answer (Please select your correct option)

Int

This

Const

New



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Question No : 33 of 52

Marks: 1 (Budgeted Time 1 Min)

A class that declares or inherits a virtual function is called a _____ class.

Answer (Please select your correct option)

Inherited

Protected

Polymorphic

Friend



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Question No : 34 of 52

Marks: 1 (Budgeted Time 1 Min)

Suppose you create an uninitialized vector as follows:

```
vector<int> evec;  
After adding the statment,  
evec.push_back(21);  
what will happen?
```

Answer (Please select your correct option)

- It will add an element to the start of evec and will initialize it with 21.
- It will add an element to the center of evec and will reinitialize it with 21.
- It will delete an element to the end (the back) of evec and will reinitialize it with 21.
- It will add an element to the end (the back) of evec and initialize it with 21.



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A static function

Answer (Please select your correct option)

- should be called when an object is destroyed.
- is closely connected to an individual object of a class.
- can be called using the class name followed by function name.
- is used when a dummy object must be created.



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Question No : 36 of 52

Marks: 1 (Budgeted Time 1 Min)

Which is not the Advantage of inheritance?

Answer (Please select your correct option)

providing class growth through natural selection.

facilitating class libraries.

avoiding the rewriting of code.

providing a useful conceptual framework.



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Question No : 37 of 52

Marks: 1 (Budgeted Time 1 Min)

```
class DocElement
{
public:
    virtual void Print() { cout << "Generic element"; }
};
class Heading : public DocElement
```

Answer (Please select your correct option)

- Generic element
- Heading element
- Paragraph element
- Nothing will be printed.



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Question No : 38 of 52

Marks: 1 (Budgeted Time 1 Min)

A pointer to a base class can point to object of a _____ class.

Answer (Please select your correct option)

Base

Derived

Abstract

Virtual



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The specialization pattern <T*> after the name says that this specialization is to be used for every,

Answer (Please select your correct option)

pointer type

meta type

virtual type

data type



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Question No : 40 of 52

Marks: 1 (Budgeted Time 1 Min)

Each try block can have _____ no. of catch blocks.



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Answer (Please select your correct option)

1

2

3

As many as necessary.

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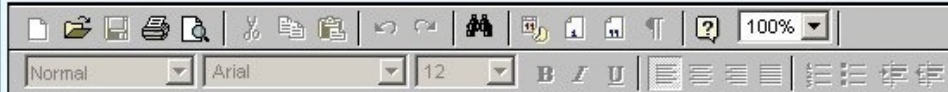
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Question No : 41 of 52

Marks: 2 (Budgeted Time 4 Min)

What are the non - type parameters for templates?

Answer (Please [click here](#) to Add Answer)



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Question No : 42 of 52

Marks: 2 (Budgeted Time 4 Min)

Define Catch Handler in brief.

Answer (Please [click here](#) to Add Answer)



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How static and dynamic binding is used in the case of virtual functions? Justify your answer as well.

Answer (Please [click here](#) to Add Answer)



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Question No : 44 of 52

Marks: 2 (Budgeted Time 4 Min)

Can we use initialization list to set the value of any base class public data member? Justify your answer in either case as well.

Answer (Please [click here](#) to Add Answer)



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Write a template function that takes one template parameter and always returns value that is always equal to double of its parameter value (parameter * 2).

Answer (Please [click here](#) to Add Answer)



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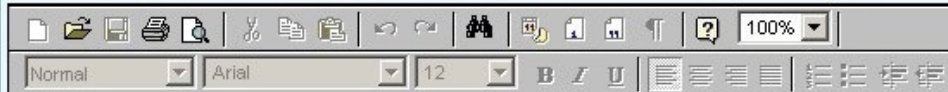
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Question No : 46 of 52

Marks: 3 (Budgeted Time 6 Min)

Give c++ code to overload assignment operator for string class.

Answer (Please [click here](#) to Add Answer)



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Question No : 47 of 52

Marks: 3 (Budgeted Time 6 Min)

Consider the code below,

```
template< typename T >  
class T1 {  
    public:  
    T i;
```

Answer (Please [click here](#) to Add Answer)



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Question No : 48 of 52

Marks: 3 (Budgeted Time 6 Min)

Tell the logical error/s in the code given below with reference to resource management, also describe how we can correct that error/s.

```
class Test(  
  
public:  
int function1(){
```

Answer (Please [click here](#) to Add Answer)



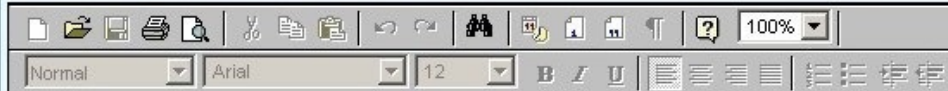
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Write c++ code to overload **subscript[]** operator for **String class**.

Answer (Please [click here](#) to Add Answer)



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Question No : 50 of 52

Marks: 5 (Budgeted Time 10 Min)

Consider the code below,

```
#include <iostream>
#include <stdlib.h>
using namespace std;
class Shape{
```

Answer (Please [click here](#) to Add Answer)



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There are some errors in the code given below, you have to

1. Indicate the line no. with error/s
2. Give the reason for error/s
3. Correct the error/s.

1. `#include <iostream>`

Answer (Please [click here](#) to Add Answer)



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Create a Vector array of length 8, and also initialize the elements of this array with values 0 1 2 3 4 5 6 7.

Answer (Please [click here](#) to Add Answer)



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